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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/687,303  
Filing Date: October 12, 2000  
Appellant(s): MILLER ET AL.

**MAILED**

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**GROUP 3600**

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John J. Timar  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed June 27, 2007 appealing from the Office action mailed December 27, 2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is essentially correct.

The Examiner notes that appellant correctly pointed out the error with the prior art rejections of claims 10-13, 22-23, and 26. Nelson was not a prior art reference actually used to reject these claims. The rejection should read as follows:

Claims 10-13, 22-23 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Becker in view of Schlumberger. (Nelson is not used to reject this set of claims).

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**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

6,591,263	BECKER et al.	7-2003
6,496,568	NELSON	12-2002

Schlumberger Demonstrates Unique Value-Added Loyalty Application at CTIA Wireless '99, Business Editors CTIA Wireless '99, Business Wire, New York, Feb. 8, 1999.

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9, 14-21, 24-25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson (US 6,496,568) (hereinafter referred to as Nelson) in view of Becker et al (US 6,591,263) (hereinafter referred to as Becker and further in view of

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Schumberger Demonstrates Unique Value-Added Loyalty Application At CTIA Wireless '99 (hereinafter referred to As Schumberger).

Regarding Claim 1:

Nelson discloses a computer program stored on a computer-readable medium for operating a host computer **to automatically notify passengers or agents of changes in status for airline flights**, the computer program comprising:

a code segment executed by the host computer for receiving a scheduled time of departure or arrival for an airline flight (Figure 1 (143) Flight Manifests; 142 Real-Time Flight Information);

a code segment executed by the host computer for receiving an updated time of departure or arrival for the airline flight (col. 2, lines 40-47 – *a flight delay or early arrival*, (Figure 1, (142) *Real time flight information, notifier and updater system 110*, col. 5, lines 3-13);

a code segment executed by the host computer for comparing (*polling and evaluating*) the updated time of departure or arrival to the scheduled time of departure or the arrival for the flight (Figure 3B(350-365) col. 2, lines 17-25 and 35-39, col. 5, lines 3-13 *the customer message manager performing the steps of polling an airline system to receive airline information, evaluating the received information to generate notification events*); and

a code segment executed by the host computer for automatically pushing **flight status change** notification information to at least one passenger on the airline flight or an agent of the passenger (col. 1, lines 64-67 *the customer message manager provides*

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*notification through email, paging, a web site, automated voice synthesis, interactive voice response, and/or a call center, col. 2, lines 17-25 polling and evaluating the received airline information to generate notification events, determining a set of customers to provide notification of the generated notification event and initiating notification to the set of customers)*

Nelson does not explicitly disclose the notification is pushed to the passenger if the updated time of departure or arrival varies from the scheduled time of departure or arrival *by a predetermined amount of time* or that the request is at the time of making the reservation or ***a code segment for receiving passenger reservation information from an airline passenger or an agent, the passenger reservation information including a request for automatic flight status change notification information for an airline flight the passenger is reserving.***

However, Becker teaches notification if the updated time of departure or arrival varies by a predetermined amount of time (notification criteria such as information threshold which includes total length of anticipated delay) (col. 4, line 67 thru col. 5, line 4 *system notify them automatically according to a set of notification criteria such as time of day, information threshold (e.g. total length of anticipated delays, total travel time, required arrival time, etc and the like)* and a personalized multi-modal profile (Figure 1 (100)) which contains such items as the notification time windows during which travel is anticipated (col. 4, lines 41-58) and wherein the end users may request personalized information at any time (col. 4, line 64 thru col. 5, line 4) (this can be broadly interpreted to incorporate a request at the time the reservation is made).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the notification criteria of Becker with the disclosure of Nelson since the Multi Modal Travel Information System (MTIS) of Nelson significantly reduces the traveler's burden and frustration with the additional and often irrelevant information reported by known systems through dissemination of portions of the generalized travel conditional information and provides for personalized information for personalized travel conditions.

Schlumberger receiving passenger reservation information from an airline passenger or an agent, the passenger reservation information including a request for automatic flight status change notification information for an airline flight the passenger is reserving (page 1, paragraph 2, page 2, paragraph 2; Schlumberger uses smart card-enabled push/pull technology to deliver personalized flight information; when a subscriber books a flight on a participating airline, the subscriber will have the option of automatically receiving the following information and alerts delivered via his/her hand set: Alerts about gate changes, flight delays or cancellations.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate into the notification system disclosed in Nelson the option at the time of booking to receiving the alert information taught in Schlumberger so as to provide personalized and on-demand flight information as a complementary service for the most important common customers thereby creating a value added service with special appeal to business travelers and allowing the airline companies to retain customers and grow their subscriber base.

Regarding Claim 6:

Nelson discloses a computer program stored on a computer-readable medium for operating a host computer ***to automatically notify passengers or agents of changes in status for airline flights***, the computer program comprising;

a code segment executed by the host computer for receiving and storing in a database scheduled times of departure or arrival for airline flights (Figure 1 (143) Flight Manifests);

a code segment executed by the host computer for receiving and storing in the database any updated times of departure or arrival for the flights (col. 2, lines 40-47 –*a flight delay or early arrival*, (Figure 1 (142) *Real time flight information, notifier and updater system* 110, col. 5, lines 3-13);

a code segment for comparing (*polling and evaluating*) for each of the flights the scheduled time of departure or arrival to the updated time of departure or arrival ((Figure 3B(350-365) col. 2, lines 17-25 and 35-39, col. 5, lines 3-13 *the customer message manager performing the steps of **polling** an airline system to receive airline information, **evaluating** the received information to generate notification events*);

a code segment for flagging (*determining*) records in the database corresponding to flights in which the updated times of departure or arrival vary from the scheduled times of departure or arrival (col. 3, lines 44-67 *Customer Message Manager (CMM) (105) comprises a notifier and updater system (110) which is the computing engine that drives the determination of which events require customer notification and then*



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*commences the process using a set of notifier rules(106) in making this determination, col. 5, lines 3-13 - CMM 105 polls airline databases 130 and then based on notifier rules, notifier and updater system 110 determine (flag) what events require customer notification); and*

*a code segment for periodically querying the database to locate all flagged records and pushing **flight status change** notification information to **each** passenger **or agent** of the passenger on each flight corresponding to a record that has been flagged (Figure 3A 300-320 col. 3, lines 54-67 *notifier and updater system 110 can then query the airline databases 130 and determine what passengers are on the canceled flight and initiate the order of notification to the affected customers based on some criteria*). set of customers)*

Nelson does not explicitly disclose the notification is pushed to the passenger if the updated time of departure or arrival varies from the scheduled time of departure or arrival *by a predetermined amount of time* or that the request is at the time of making the reservation or **a code segment for receiving passenger reservation information from airline passengers or agents, the passenger reservation information including a request for automatic flight status change notification information for an airline flight a passenger is reserving.**

However, Becker teaches notification if the updated time of departure or arrival varies by a predetermined amount of time (notification criteria such as information threshold which includes total length of anticipated delay) (col. 4, line 67 thru col. 5, line 4 *system notify them automatically according to a set of notification criteria such as time*

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*of day, information threshold (e.g. total length of anticipated delays, total travel time, required arrival time, etc and the like)* and a personalized multi-modal profile (Figure 1 (100)) which contains such items as the notification time windows during which travel is anticipated (col. 4, lines 41-58) and wherein the end users may request personalized information at any time (col. 4, line 64 thru col. 5, line 4) (this can be broadly interpreted to incorporate a request at the time the reservation is made).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the notification criteria of Becker with the disclosure of Nelson since the Multi Modal Travel Information System (MTIS) of Nelson significantly reduces the traveler's burden and frustration with the additional and often irrelevant information reported by known systems through dissemination of portions of the generalized travel conditional information and provides for personalized information for personalized travel conditions.

Schlumberger discloses receiving passenger reservation information from an airline passenger or an agent, the passenger reservation information including a request for automatic flight status change notification information for an airline flight the passenger is reserving (page 1, paragraph 2, page 2, paragraph 2; Schlumberger uses smart card-enabled push/pull technology to deliver personalized flight information; when a subscriber books a flight on a participating airline, the subscriber will have the option of automatically receiving the following information and alerts delivered via his/her hand set: Alerts about gate changes, flight delays or cancellations.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate into the notification system disclosed in Nelson the option at the time of booking to receiving the alert information taught in Schlumberger so as to provide personalized and on-demand flight information with a complementary service for the most important common customers creating a value added service with special appeal to business travelers, thus allowing the airline companies to retain customers and grow their subscriber base.

Regarding Claim 14:

Nelson discloses method of notifying airline passengers of airline flight status changes, the method comprising the steps of:

receiving scheduled departure or arrival times of a plurality of airline flights and storing the scheduled departure or arrival times in a computer readable memory (Figure 1 (143) Flight Manifests);

receiving updated departure or arrival times for the airline flights from a source and storing the updated departure or arrival times in a computer readable memory (Col. 2, lines 40-47 –flight delay or early arrival; Figure 1 (142) Real time flight information);

comparing (*polling and evaluating*) the scheduled departure or arrival times to the updated departure or arrival times by a computer(Figure 3B(350-365) col. 2, lines 17-25 and 35-39, col. 5, lines 3-13 *the customer message manager performing the steps of **polling** an airline system to receive airline information, **evaluating** the received information to generate notification events*); and

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automatically pushing **flight status change** notification information to at least one passenger on an airline flight if the updated departure or arrival time for the airline flight varies from the scheduled departure or arrival for the airline flight (col. 1, lines 64-67 *the customer message manager provides notification through email, paging, a web site, automated voice synthesis, interactive voice response, and/or a call center*, col. 2, lines 17-25 *polling and evaluating the received airline information to generate notification events, determining a set of customers to provide notification of the generated notification event and initiating notification to the set of customers*).

*set of customers*)

Nelson does not explicitly disclose the notification is pushed to the passenger if the updated time of departure or arrival varies from the scheduled time of departure or arrival by a predetermined amount of time or that the request is at the time of making the reservation or **receiving passenger reservation information from the airline passengers, the passenger reservation information including a request for automatic flight status change notification information for an airline flight the passenger is reserving.**

However, Becker teaches notification if the updated time of departure or arrival varies by a predetermined amount of time (notification criteria such as information threshold which includes total length of anticipated delay) (col. 4, line 67 thru col. 5, line 4 *system notify them automatically according to a set of notification criteria such as time of day, information threshold (e.g. total length of anticipated delays, total travel time, required arrival time, etc and the like)* and a personalized multi-modal profile (Figure 1

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(100)) which contains such items as the notification time windows during which travel is anticipated (col. 4, lines 41-58) and wherein the end users may request personalized information at any time (col. 4, line 64 thru col. 5, line 4) (this can be broadly interpreted to incorporate a request at the time the reservation is made).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the notification criteria of Becker with the disclosure of Nelson since the Multi Modal Travel Information System (MTIS) of Nelson significantly reduces the traveler's burden and frustration with the additional and often irrelevant information reported by known systems through dissemination of portions of the generalized travel conditional information and provides for personalized information for personalized travel conditions.

Schlumberger discloses receiving passenger reservation information from an airline passenger or an agent, the passenger reservation information including a request for automatic flight status change notification information for an airline flight the passenger is reserving (page 1, paragraph 2, page 2, paragraph 2; Schlumberger uses smart card-enabled push/pull technology to deliver personalized flight information; when a subscriber books a flight on a participating airline, the subscriber will have the option of automatically receiving the following information and alerts delivered via his/her hand set: Alerts about gate changes, flight delays or cancellations.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate into the notification system disclosed in Nelson the option at the time of booking to receiving the alert information taught in Schlumberger so as to

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provide personalized and on-demand flight information with a complementary service for the most important common customers creating a value added service with special appeal to business travelers, thus allowing the airline companies to retain customers and grown their subscriber base.

Regarding Claims 2, 7 and 15:

Nelson discloses a computer program and method wherein the notification information includes information relating to the updated time of departure or arrival for the airline (Figures 5A (510) *compose email message wherein 5B (555) represents a response from the customer*).

Regarding Claims 3-4, 8-9, and 16-17:

Nelson does not disclose the notification if the updated time of departure or arrival varies from the scheduled time of departure or arrival *by a predetermined amount of time, that the predetermined amount of time is 10-60 minutes or approximately 30 minutes*.

However, Becker teaches notification if the updated time of departure or arrival varies by a predetermined amount of time (notification criteria such as information threshold which includes total length of anticipated delay) (col. 4, line 67 thru col. 5, line 4 *system notify them automatically according to a set of notification criteria such as time of day, information threshold (e.g. total length of anticipated delays, **which could include 10-60 minutes or approximately 30 minutes**, total travel time, required arrival time, etc and the like)*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the notification criteria of Becker with the disclosure of Nelson since the Multi Modal Travel Information System (MTIS) of Nelson significantly reduces the traveler's burden and frustration with the additional and often irrelevant information reported by known systems through dissemination of portions of the generalized travel conditional information and provides for personalized information for personalized travel conditions.

Regarding Claim 5:

Schlumberger discloses ***wherein the passenger reservation information includes passenger contact information for receiving automatic flight status change notification*** information about the airline flight the passenger is reserving (page 1 and page 2 Schlumberger uses smart card-enabled push/pull technology to deliver personalized flight information; when a subscriber books a flight on a participating airline, the subscriber will have the option of automatically receiving the following information and alerts delivered via his/her hand set: Alerts about gate changes, flight delays or cancellations (The passenger reservation information would inherently have to include passenger contact information for receiving notification since alerts are delivered via the hand set).

Regarding Claims 18 and 20:

Nelson discloses computer program wherein the host computer comprises a plurality of computing devices (Figure 1, col. 4, lines 2-6 and 46-56, Fig 7A, notification via web page server).

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Regarding Claims 19 and 21:

Nelson discloses a computer program wherein the host computer comprises a computer network (Figure 1, col. 4, lines 2-6, 46-56, Figure 7A notification via a web page server).

Regarding Claims 24-25 and 27:

Nelson discloses computer program and method wherein the notification information is pushed through electronic mail (col. 4, lines (46-56, Figure 5A (500-515) send email message).

Claims 10-13, 22-23 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Becker in view of Schlumberger.

Regarding Claim 10, 12 and 13:

Becker discloses a computer program stored on a computer readable medium for operating a host computer **to automatically notify passengers or agents of changes in status for airline flights**, comprising code segments executed by the host computer for:

receiving passenger reservation information from an airline passenger **or an agent of the passenger** (col. 5, lines 42-55 *Data elements are collected/captured for their personal profile for uniquely identifying the traveler, their personal travel route(s) and their preferred notification criteria and communication devices for information delivery*; Figure 1 (40) col. 5, lines 20-29 *conditions information (accidents, congestion,*



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**delays);** *Personalized multi-Modal Route Profiles – Route –Description – Origin – Destination; col. 4, lines 41-58, discloses travel mode as being rail, ferry, **air**, or tramway, etc., profile contains such items as the traveler's name, preferred travel mode, travel time(s)*

storing the passenger reservation information including the scheduled time of departure or arrival of the flight (col. 4, lines 41-58 – *personalized multi-modal profile contains such item as the notification time window(s) during with travel is anticipated; col. 5, lines 42-55 – each route defined within the profile contains a description, origin, multi-modal path and destination and the notification criteria includes the days of the week and times of day that travel on the route is anticipated)*

receiving contact information from the passenger (col. 4, lines 41-58 (*profile contains preferred information delivery device, e.g. telephone, fax, pager, e-mail, etc,* Figure 1 (40);

receiving an updated time of departure or arrival for the flight (col. 4, lines 29-40 *system receives real-time travel condition information);*

accessing the date ranged information and comparing the scheduled time of departure or arrival to the updated time of departure or arrival (col. 2, line 52 thru col. 3, line 3 *system and method for filtering real time travel condition information in regard to traveler identity, destination, route, mode of conveyance and/or intended travel time for limitation information, col. 12, line 64 thru col. 13, line 3 (successful comparisons provided identification of the affected customers and corresponding route for storage with information concerning the travel conditions event as an affected customer list is*

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*built, col. 5, line 67 thru col. 6, line 4 once determination made that customer's designated notification time window falls some time during the expected duration of the event, a determination is made as to when to notify the customer of the travel condition); and*

automatically pushing **flight status** notification information to the passenger or to an agent of the passenger who has requested notification information via the contact information if the updated time of departure or arrival varies from the scheduled time of departure or arrival by a predetermined amount of time (col. 4, line 67 thru col. 5, lines 4 *system notify them **automatically** according to a set of notification criteria such information thresholds e.g. total length of anticipated delays* – which could include a predetermined amount of time between 10-60 minutes or an amount of time of approximately 30 minutes; col. 6, lines 4-8 *the final filtering process is to determine the customer's notification preference e.g. telephone, pager, email, facsimile, Internet, Intranet*; a personalized multi-modal profile (Figure 1 (100)) contains such items as the notification time windows during which travel is anticipated (col. 4, lines 41-58) the end users may request personalized information at any time (col. 4, line 64 thru col. 5, line 4) (this can be broadly interpreted to incorporate a request at the time the reservation is made).

Becker does not disclose queuing the passenger information at a date-ranged queue using the time of departure or arrival or that the passenger reservation information includes **a request for automatic flight status change notification**

***information for an airline flight the passenger is reserving or that the request is at the time of making the reservation.***

However, Becker discloses collecting/capturing the personal profile information which includes time of departure or arrival and the expected duration of the travel condition wherein a determination is made that the customer's designated notification time window falls some time during the expected duration of the event and then a determination is made as to when to notify the customer about the condition (col. 5, line 42 thru col. 6, line 8).

The Examiner takes Official Notice that putting information in a queue is old and well known in the art since queuing is simply listing items to be done, for example, a print queue for a printer prints the items in the order that they are requested.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Becker to include the step of queuing the information with respect to date in order for ease of processing.

Schlumberger discloses a code segment for receiving passenger reservation information from an airline passenger or an agent, the passenger reservation information including a request for automatic flight status change notification information for an airline flight the passenger is reserving (page 1, paragraph 2, page 2, paragraph 2; Schlumberger uses smart card-enabled push/pull technology to deliver personalized flight information; when a subscriber books a flight on a participating airline, the subscriber will have the option of automatically receiving the following information and

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alerts delivered via his/her hand set: Alerts about gate changes, flight delays or cancellations.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate into the notification system disclosed in Becker the option at the time of booking to receiving the alert information taught in Schlumberger so as to provide personalized and on-demand flight information with a complementary service for the most important common customers creating a value added service with special appeal to business travelers, thus allowing the airline companies to retain customers and grown their subscriber base.

Regarding Claim 11:

Becker discloses a program wherein the notification information includes information relating to the updated time of departure or arrival (col. 5, lines 20-41 dissemination of personalized travel conditions information).

Regarding Claim 22:

Becker discloses a computer program wherein the host computer comprises a plurality of computing devices (Figure 2, col. 5, lines 14-19 delivery devices may be pages, email, facsimile, Internet, Intranet, in-vehicle devices).

Regarding Claim 23:

Becker discloses computer program wherein the host computer comprises a computer network (Internet col. 5, lines 42-45).

Regarding Claims 26:

Becker discloses a computer program wherein the notification information is pushed through electronic mail. (Figure 1 (60), Figure 14 (1403 Customer Notification Device (E-Mail))

### (10) Response to Argument

#### Issue A: Whether the rejection of claims 1-9, 14-21, 24-25, and 27 under 35 USC 103(a) is proper

On page 7 of the Appeal Brief, appellant states that:

In determining the scope and content of the prior art, **the Examiner must first consider the nature of the problem on which the inventor was working. Once this has been established, the Examiner must select, for purposes of comparing and contrasting with the claims at issue, prior art references that are reasonably pertinent to that problem, i.e., the inventors' field of endeavor.** Heidelberg Druckmaschinen AG v. Hantscho Commercial Products, Inc., 30 USPQ 2d 1377, 1379 (Fed. Cir. 1994). In selecting references, hindsight must be avoided at all costs.

Since appellant has cited KSR Int'l Co. v. Teleflex, Inc., 550 U. S. \_\_\_, 82 USPQ2d 1385 (2007) throughout applicant's arguments, the Examiner directs the appellant to the following paragraphs also set forth in KSR:

c) The flaws in the Federal Circuit's analysis relate mostly to its narrow conception of the obviousness inquiry consequent in its application of the TSM test. ***The Circuit first erred in holding that courts and patent examiners should look only to the problem the patentee was trying to solve.*** Under the correct analysis, ***any need or problem known in the field and addressed by the patent*** can provide a reason for combining the elements in the manner claimed. Second, the appeals court erred in assuming that a person of ordinary skill in the art attempting to solve a problem will be led only to those prior art

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elements designed to solve the same problem. The court wrongly concluded that because Asano's primary purpose was solving the constant ratio problem, an inventor considering how to put a sensor on an adjustable pedal would have no reason to consider putting it on the Asano pedal. It is common sense that familiar items may have obvious uses beyond their primary purposes, and a person of ordinary skill often will be able to fit the teachings of multiple patents together like pieces of a puzzle. Regardless of Asano's primary purpose, it provided an obvious example of an adjustable pedal with a fixed pivot point, and the prior art was replete with patents indicating that such a point was an ideal mount for a sensor. Third, the court erred in concluding that a patent claim cannot be proved obvious merely by showing that the combination of elements was obvious to try. When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill in the art has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense. Finally, the court drew the wrong conclusion from the risk of courts and patent examiners falling prey to hindsight bias. Rigid preventative rules that deny recourse to common sense are neither necessary under, nor consistent with, this Court's case law. Pp. 1389-1390).

The flaws in the analysis of the Court of Appeals relate for the most part to the court's narrow conception of the obviousness inquiry reflected in its application of the TSM test. ***In determining whether the subject matter of a patent claim is obvious, neither the particular motivation nor the avowed purpose of the patentee controls. What matters is the objective reach of the claim.*** If the claim extends to what is obvious, it is invalid under §103. One of the ways in which a patent's subject matter can be proved obvious is by noting that there existed at the time of invention a known problem for which there was an obvious solution encompassed by the patent's claims (1397).

Appellant states on page 7, that for purposes of the present appeal, one of ordinary skill in the art is considered to be a computer programmer having a bachelor's degree in computer science and one to two years of experience in design and/or development of application software for the global distribution industry. The Examiner asserts that specifying a particular level of skill is not necessary where the prior art itself

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reflects an appropriate level. If the only facts of record pertaining to the level of skill in the art are found within the prior art of record, the court has held that an invention may be held to have been obvious without a specific finding of a particular level of skill where the prior art itself reflects an appropriate level. *Chore-Time Equipment, Inc. v. Cumberland Corp.*, 713 F.2d 774, 218 USPQ 673 (Fed. Cir. 1983). See also *Okajima v. Bourdeau*, 261 F.3d 1350, 1355, 59 USPQ2d 1795, 1797 (Fed. Cir. 2001).

Furthermore, appellant has tried to define the level of skill using the District Court's determination in the KSR decision. However, in the KSR decision, the court held that the District Court determined, in light of expert testimony and the parties' stipulation, that the level of ordinary skill in pedal design was "an undergraduate degree in mechanical engineering (or an equivalent amount of industry experience) [and] familiarity with pedal control. The Examiner asserts that there has been no expert testimony made of record nor any stipulation as to the level of ordinary skill in the travel/airline industry. While a computer programmer is necessary to create a computer program once the necessary program is identified, the Examiner asserts that one would also expect the person of ordinary skill to also possess some background in business and the airline scheduling industry.

Appellant further states on page 7 of the Appeal Brief that, in resolving the level of ordinary skill in the pertinent art as required by the third step in *Graham*, the Examiner must step backward in time and into the shoes worn by a person of ordinary skill when the invention was unknown and just before it was made. The Examiner notes that appellant then identifies *the hypothetical person skilled in the art*, rather than the

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hypothetical person of ordinary skill in the art. Appellant states that this hypothetical person can summarily be described as one who thinks along lines of conventional wisdom in the art and neither one who undertakes to innovate nor one who has the benefit of hindsight.

Appellant is again directed to KSR, wherein the court held:

1. **Graham provided an expansive and flexible approach to the obviousness question that is inconsistent with the way the Federal Circuit applied its TSM test here.** Neither §103's enactment nor *Graham's* analysis disturbed the Court's earlier instructions concerning the need for caution in granting a patent based on the combination of elements found in the prior art. See *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp.*, 340 U.S. 147, 152 [87 USPQ 303]. **Such a combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.** See, e.g., *United States v. Adams*, 383 U.S. 39, 50–52 [148 USPQ 479]. When a work is available in one field, design incentives and other market forces can prompt variations of it, either in the same field or in another. **If a person of ordinary skill in the art can implement a predictable variation, and would see the benefit of doing so, §103 likely bars its patentability.** Moreover, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond that person's skill. **A court must ask whether the improvement is more than the predictable use of prior-art elements according to their established functions.** Following these principles may be difficult if the claimed subject matter involves more than the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement. **To determine whether there was an apparent reason to combine the known elements in the way a patent claims, it will often be necessary to look to interrelated teachings of multiple patents; to the effects of demands known to the design community or present in the marketplace; and to the background knowledge possessed by a person having ordinary skill in the art.** To facilitate review, this analysis should be made explicit. **But it need not seek out precise teachings directed to the challenged claim's specific subject matter, for a court can consider the inferences and creative steps a person of ordinary skill in the art would employ.** Pp. 11–14. (p. 1389)



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***It is common sense that familiar items may have obvious uses beyond their primary purposes, and a person of ordinary skill often will be able to fit the teachings of multiple patents together like pieces of a puzzle.*** Regardless of Asano's primary purpose, it provided an obvious example of an adjustable pedal with a fixed pivot point, and the prior art was replete with patents indicating that such a point was an ideal mount for a sensor. ***Third, the court erred in concluding that a patent claim cannot be proved obvious merely by showing that the combination of elements was obvious to try. When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill in the art has good reason to pursue the known options within his or her technical grasp.*** If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense. ***Finally, the court drew the wrong conclusion from the risk of courts and patent examiners falling prey to hindsight bias. Rigid preventative rules that deny recourse to common sense are neither necessary under, nor consistent with, this Court's case law.*** Pp. 15–18. (p. 1390).

***A person of ordinary skill is also a person of ordinary creativity, not an automaton*** (pp. 17) (p. 1397).

As for appellant's references to hindsight, KSR sets forth the following:

The Court of Appeals, finally, drew the wrong conclusion from the risk of courts and patent examiners falling prey to hindsight bias. A factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning. See *Graham*, 383 U.S., at 36 (warning against a "temptation to read into the prior art the teachings of the invention in issue" and instructing courts to " 'guard against slipping into the use of hindsight' " (quoting *Monroe Auto Equipment Co. v. Heckethorn Mfg. & Supply Co.*, 332 F.2d 406, 412 [141 USPQ 549] (CA6 1964))). ***Rigid preventative rules that deny factfinders recourse to common sense, however, are neither necessary under our case law nor consistent with it.***

Appellant states on page 8 of the appeal brief that:

***In order to establish a prima facie case of obviousness, it is necessary for the Examiner to present evidence, preferably in the form of some teaching, suggestion, incentive, or inference in the applied prior art, or in the form of generally available knowledge that one having ordinary skill in the art would have been led to combine the relevant teachings of the applied references in the proposed manner to arrive at the claimed invention. Ex***

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parte Levingood, 28 USPQ 2d 1300, 1301 (Bd. Pat. App. & Int. 1993); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 227 USPQ 657 (Fed. Cir. 1985). The legal conclusion of obviousness must be supported by facts. See Graham. Where the legal conclusion is not supported by facts, it cannot stand. Id.

The Examiner asserts that KSR forecloses the argument that a specific teaching, suggestion, or motivation is required to support a finding of obviousness. See the recent Board decision *Ex parte Smith*, --USPQ2d, slip.op. at 20 (Bd. Pat. App. & Interf. June 25, 2007) (citing KSR) although the Examiner did find motivation for combining the references in the prior art references.

As for appellant's statement that the Examiner cannot determine obviousness by locating references that describe various aspects of the applicant's invention without providing a reason, the Examiner asserts that the reason/motivation for the combination was taken from the references, as will be discussed below.

In response to appellant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, as set forth above, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

The Examiner notes that appellant has provided no secondary factors to rebut the Examiner's determination of obviousness.

Claims 1 and 14:

The Examiner rejected claims 1 and 14 as follows:

Nelson discloses a method computer program stored on a computer-readable medium for operating a host computer to automatically notify passengers or agents of changes in status for airline flights, comprising:

a code segment executed by the host computer for receiving a scheduled time of departure or arrival for an airline flight (Figure 1 (143) Flight Manifests; 142 Real-Time Flight Information);

a code segment executed by the host computer for receiving an updated time of departure or arrival for the airline flight (col. 2, lines 40-47 – *a flight delay or early arrival*, (Figure 1, (142) *Real time flight information, notifier and updater system 110*, col. 5, lines 3-13);

a code segment executed by the host computer for comparing (*polling and evaluating*) the updated time of departure or arrival to the scheduled time of departure or the arrival for the flight (Figure 3B(350-365) col. 2, lines 17-25 and 35-39, col. 5, lines 3-13 *the customer message manager performing the steps of **polling** an airline system to receive airline information, **evaluating** the received information to generate notification events*); and

a code segment executed by the host computer for automatically pushing **flight status change** notification information to at least one passenger on the airline flight or an agent of the passenger (col. 1, lines 64-67 *the customer message manager provides notification through email, paging, a web site, automated voice synthesis, interactive*

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*voice response, and/or a call center, col. 2, lines 17-25 polling and evaluating the received airline information to generate notification events, determining a set of customers to provide notification of the generated notification event and initiating notification to the set of customers).*

The Examiner stated that Nelson does not explicitly disclose the notification is pushed to the passenger if the updated time of departure or arrival varies from the scheduled time of departure or arrival **by a predetermined amount of time** or that the **request is at the time of making the reservation** or a code segment and step for receiving passenger reservation information from an airline passenger or an agent, the passenger reservation information including a request for automatic flight status change notification information for an airline flight the passenger is reserving.

However, the Examiner asserted that Becker teaches notification if the updated time of departure or arrival varies by a predetermined amount of time (notification criteria such as information threshold which includes total length of anticipated delay) (col. 4, line 67 thru col. 5, line 4 *system notify them automatically according to a set of notification criteria such as time of day, information threshold (e.g. total length of anticipated delays, total travel time, required arrival time, etc and the like)* and a personalized multi-modal profile (Figure 1 (100)) which contains such items as the notification time windows during which travel is anticipated (col. 4, lines 41-58) and wherein the end users may request personalized information at any time (col. 4, line 64 thru col. 5, line 4) (this can be broadly interpreted to incorporate a request at the time the reservation is made).

The Examiner asserted that Schlumberger receives passenger reservation information from an airline passenger or an agent, the passenger reservation information including a request for automatic flight status change notification information for an airline flight the passenger is reserving (page 1, paragraph 2, page 2, paragraph 2; Schlumberger uses smart card-enabled push/pull technology to deliver personalized flight information; when a subscriber books a flight on a participating airline, the subscriber will have the option of automatically receiving the following information and alerts delivered via his/her hand set: Alerts about gate changes, flight delays or cancellations).

The Examiner then asserted that:

1. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the notification criteria of Becker with the disclosure of Nelson since the Multi Modal Travel Information System (MTIS) of Nelson significantly reduces the traveler's burden and frustration with the additional and often irrelevant information reported by known systems through dissemination of portions of the generalized travel conditional information and provides for personalized information for personalized travel conditions (see Becker col. 4, lines 41-58 for motivation); and

2. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate into the notification system disclosed in Nelson the option at the time of booking to receiving the alert information taught in Schlumberger so as to provide personalized and on-demand flight information as a complementary service for the most important common customers thereby creating a value added service with

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special appeal to business travelers and allowing the airline companies to retain customers and grow their subscriber base (see page 1 paragraph 2 for motivation).

Appellant asserts on page 11 of the Appeal Brief that the present invention is distinguished from Nelson in that the present invention **continuously** updates flight status and then automatically delivers notification to each passenger requesting notification while Nelson teaches periodic polling of flight status followed by pushing notification. However, upon looking at applicant's claim limitations in claims 1 and 14, applicant's invention is directed to a step of receiving passenger reservation information, a step of receiving scheduled departure or arrival times and storing the times, a step of receiving updated departure or arrival times and storing the times, and a step of comparing the times and automatically pushing flight status change notification information to each passenger who has requested the notification information if the updated time varies from the scheduled departure or arrival time by a predetermined amount of time.

Nelson discloses polling an airline system to receive airline information, evaluating the information to generate notification events, determining a set of customers to provide notification of the generating event and initiating notification in the order identified by a predetermined criteria (col. 2, lines 17-25). The Examiner asserts that there is nothing in appellant's claim limitations that distinguish over the polling, evaluating and notification disclosed in Nelson.

Moreover, in the rejection the Examiner asserts that Nelson does not disclose receiving passenger reservation information from a passenger or agent **wherein the**

**information includes a request for automatic flight status change notification**

**information.** The Examiner asserts that Nelson does not teach automatically pushing flight status change notification to the passenger **if the updated time varies by a predetermined amount.**

However, the Examiner asserts that Nelson in combination with Becker and Schlumberger, wherein Becker teaches automatically pushing flight status change notification to the passenger **if the updated time varies by a predetermined amount** and wherein Schlumberger teaches the information includes **a request for automatic flight status change notification**, teach applicant's claimed limitations.

Furthermore, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Appellant attempts to distinguish applicant's invention from Becker on page 12 of the Appeal Brief by stating that Becker differs in one aspect from the claimed invention in that a passenger would have to make flight reservations through a flight reservation system and separately register his person profile information with particular routes for his travel itinerary in order to be notified. Appellant states that Becker fails to teach or fairly suggest receiving passenger reservation information from an airline passenger or an agent of the passenger, wherein the passenger reservation information includes a request for automatic flight status change notification for an airline flight the passenger is reserving. However, Becker was not cited for this limitation. Becker was cited for the

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limitation of automatically pushing flight status change notification information to the passenger or agent if the updated time of departure or arrival ***varies from the scheduled time of arrival or departure by a predetermined amount*** (col. 4, line 67 thru col. 5, line 4 *system notify them automatically according to a set of notification criteria such as time of day, information threshold (e.g. total length of anticipated delays, total travel time, required arrival time, etc and the like)*). The Examiner directs the appellant to col. 4, line 41 through col. 5, line 19, wherein Becker discloses:

(5) **The Multi-Modal Traveler Information System (MTIS) 100 significantly reduces the traveler's burden and frustration with the additional and often irrelevant information reported by known systems** through dissemination of portions of the generalized travel conditions information 20 based upon their personalized multi-modal profile input thereto, as depicted at 40. This personalized multi-modal profile would contain such items as the traveler's name, preferred travel mode(s) (e.g. roadway, bus, subway, rail, ferry, air, tramway, etc.), primary and alternate travel route(s), travel time(s), notification time window(s) during which travel is anticipated, and preferred information delivery device(s) (e.g. telephone (wired & wireless), pager (one-way & two-way), e-mail, facsimile, Internet, Intranet, in-vehicle device, etc.), collectively depicted at 60. It is with this personal information 40 that the system 100 is able to construct a filter that provides the end user with personalized travel conditions information.

(6) Dissemination of personalized information is provided by means of any end user device that is compatible with transmission of real-time voice, video or digital message information (e.g. telephone (wired & wireless), pager (one-way & two-way), e-mail, facsimile, Internet, Intranet, in-vehicle device, etc.). For devices that support two way communications, such as the telephone, Internet and two way pagers, end users may request personalized information at any time. For all devices, the end user may have the system notify them automatically according to a ***set of notification criteria*** such as time of day, ***information thresholds*** (e.g. depth of snow, ***total length of anticipated delays***, total travel time, required arrival time, etc.), and the like.

(7) The invention does not depend on any unique dissemination device, but rather provides for personalized information to be disseminated across any and all compatible devices to support the traveler's desire for freedom of device choice. Therefore, the present invention does not rely on any proprietary



communications protocols or non-public geographic referencing methods, but rather provides open communications and geographic referencing methods to ensure the broadest application of the invention and broadest availability to travelers. On the contrary, the invention employs an open modular architecture which enables the timely delivery of travel conditions information over many delivery devices (e.g. telephone (wired & wireless), pager (one-way & two-way), e-mail, facsimile, Internet, Intranet, in-vehicle device, etc.).

Appellant states that as to Schlumberger, there is no disclosure as to how an airline flight is booked or how alerts are generated and delivered. Appellant then asserts that Schlumberger fails to teach or suggest receiving passenger reservation information from an airline passenger or an agent of the passenger, wherein the passenger reservation information includes a request for automatic flight status change notification. The Examiner respectfully disagrees. Schlumberger discloses that when a subscriber books a flight on a participating airline, the subscriber will have the option of automatically receiving the following information and alerts delivered via his/her hand set: flight confirmation and schedule, two-hour reminder alert before flight time, gate information when assigned, alerts about gate changes, flight delays or cancellations, alert when the plane is being boarded (pages 1 and 2 of Schlumberger).

On page 14 of the Appeal Brief, appellant again states that there is no teaching in either Nelson or Becker of pushing flight status notification information to passenger if the updated time or departure or arrival varies from the corresponding scheduled time by more than a predetermined amount. The Examiner respectfully disagrees. Becker discloses in paragraph 6:

For all devices, the end user may have the system notify them automatically according to **a set of notification criteria** such as time of day, **information thresholds** (e.g. depth of snow, **total length of anticipated delays**, total travel time, required arrival time, etc.), and the like.

The appellant argues that there is no disclosure in Schlumberger on how an airline flight is booked or how alerts are generated and delivered using the smart card application, what functions the smart card application performs, or how the application would interface with a computerized flight reservation system. The Examiner again asserts that Schlumberger was cited for the limitation of the passenger reservation information including a request for automatic flight status change notification for a flight the passenger is reserving.

Thus, the Examiner asserts that Nelson, in combination with Becker and Schlumberger teach all of the limitations of claims 1 and 14. The Examiner asserts that the prior art are in the field of applicant's endeavor and are reasonably pertinent to the particular problem with which the appellant was concerned. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the references all disclose and teach providing flight information to passengers based on some predetermined criteria for the purpose of keeping passenger alerted to status changes in the flight.

The Examiner asserts that while the motivation to combine the references was taken from the references, the Federal Circuit has repeatedly recognized that to establish a *prima facie* case of obviousness, the references being combined do not need to explicitly suggest combining their teachings. See e.g., *Kahn*, 441 F.3d at 987-88, 78 USPQ2d at 1336 ("the teaching, motivation, or suggestion may be implicit from the prior art as a whole, rather than expressly stated in the references"); and *In re Nilssen*, 851 F.2d 1401, 1403, 7 USPQ2d 1500, 1502 (Fed. Cir. 1988) ("for the

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purpose of combining references, those references need not explicitly suggest combining teachings"). The court recently noted,

An explicit teaching that identifies and selects elements from different sources and states that they should be combined in the same way as in the invention at issue, is rarely found in the prior art. As precedent illustrates, many factors are relevant to the motivation-to-combine aspect of the obviousness inquiry, such as the field of the specific invention, the subject matter of the references, the extent to which they are in the same or related fields of technology, the nature of the advance made by the applicant, and the maturity and congestion of the field. *In re Johnston*, 435 F.3d 1381, 1385, 77 USPQ2d 1788, 1790 (Fed. Cir. 2006).

The Supreme Court has provided guidelines for determining obviousness based on the Graham factors. *KSR Int 'l v. Teleflex Inc.*, 127 S.Ct. 1727, 82 USPQ2d 1385 (2007) "[a] combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results. *Id.* at 1731, 82 USPQ2d at 1396. "When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability." *Id.* For the same reason, "if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond that person's skill." *Id.* at 1740, 82 USPQ2d 1396. "Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed." *Id.* at 1742, 82 USPQ2d at 1397.

Claim 6:

The Examiner rejected claim 6 as follows:

Nelson discloses a computer program stored on a computer-readable medium for operating a host computer to automatically notify passengers or agents of changes in status for airline flights, the computer program comprising;

a code segment executed by the host computer for receiving and storing in a database scheduled times of departure or arrival for airline flights (Figure 1 (143) Flight Manifests);

a code segment executed by the host computer for receiving and storing in the database any updated times of departure or arrival for the flights (col. 2, lines 40-47 –*a flight delay or early arrival*, (Figure 1 (142) *Real time flight information, notifier and updater system* 110, col. 5, lines 3-13);

a code segment for comparing (*polling and evaluating*) for each of the flights the scheduled time of departure or arrival to the updated time of departure or arrival ((Figure 3B(350-365) col. 2, lines 17-25 and 35-39, col. 5, lines 3-13 *the customer message manager performing the steps of **polling** an airline system to receive airline information, **evaluating** the received information to generate notification events*);

a code segment for flagging (*determining*) records in the database corresponding to flights in which the updated times of departure or arrival vary from the scheduled times of departure or arrival (col. 3, lines 44-67 *Customer Message Manager (CMM) (105) comprises a notifier and updater system (110) which is the computing engine that drives the determination of which events require customer notification and then*

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*commences the process using a set of notifier rules(106) in making this determination, col. 5, lines 3-13 - CMM 105 polls airline databases 130 and then based on notifier rules, notifier and updater system 110 determine (flag) what events require customer notification); and*

a code segment for periodically querying the database to locate all flagged records and pushing **flight status change** notification information to **each** passenger **or agent** of the passenger on each flight corresponding to a record that has been flagged (Figure 3A 300-320 col. 3, lines 54-67 *notifier and updater system 110 can then query the airline databases 130 and determine what passengers are on the canceled flight and initiate the order of notification to the affected customers based on some criteria). set of customers)*

The Examiner asserted that Nelson does not explicitly disclose the notification is pushed to the passenger if the updated time of departure or arrival varies from the scheduled time of departure or arrival *by a predetermined amount of time* or that the request is at the time of making the reservation or a code segment for receiving passenger reservation information from airline passengers or agents, the passenger reservation information including a request for automatic flight status change notification information for an airline flight a passenger is reserving.

However, the Examiner asserted that Becker teaches notification if the updated time of departure or arrival varies by a predetermined amount of time (notification criteria such as information threshold which includes total length of anticipated delay) (col. 4, line 67 thru col. 5, line 4 *system notify them automatically according to a set of*

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*notification criteria such as time of day, information threshold (e.g. total length of anticipated delays, total travel time, required arrival time, etc and the like) and a personalized multi-modal profile (Figure 1 (100)) which contains such items as the notification time windows during which travel is anticipated (col. 4, lines 41-58) and wherein the end users may request personalized information at any time (col. 4, line 64 thru col. 5, line 4) (this can be broadly interpreted to incorporate a request at the time the reservation is made).*

The Examiner asserted that Schlumberger discloses receiving passenger reservation information from an airline passenger or an agent, the passenger reservation information including a request for automatic flight status change notification information for an airline flight the passenger is reserving (page 1, paragraph 2, page 2, paragraph 2; Schlumberger uses smart card-enabled push/pull technology to deliver personalized flight information; when a subscriber books a flight on a participating airline, the subscriber will have the option of automatically receiving the following information and alerts delivered via his/her hand set: Alerts about gate changes, flight delays or cancellations.)

As to claim 6, appellant states that appellant incorporates by reference the arguments presented above concerning the teaching of Nelson, Becker, and Schlumberger.

Appellant states that each reference fails to teach "receiving and storing in a database scheduled time of departure or arrival for substantially all U.S. airline flight departing and arriving within a certain time".

First, MPEP 2111 requires the Examiner to give claim limitations their broadest reasonable interpretation in light of the specification without reading limitations from the specification into the claims. Therefore, the language substantially all airline flights departing and arriving within a certain time could be any number of flights. It could also encompass one flight if that is the only flight departing and arriving within a certain time.

Secondly, while Nelson discloses receiving and storing in a database scheduled time of departure or arrival for airline flights (Figure 1 (143) Flight Manifests), the language identifying the airline flights as substantially all U.S. airline flights is non-functional descriptive data. When presented with a claim comprising descriptive material, an Examiner must determine whether the claimed nonfunctional descriptive material should be given patentable weight. The Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art. *In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401,404 (Fed. Cir. 1983). The PTO may not disregard claim limitations comprised of printed matter. *See Gulack*, 703 F.2d at 1384-85, 217 USPQ at 403; *see also Diamond v. Diehr*, 450 U.S. 175, 191,209 USPQ 1, 10 (1981). However, the examiner need not give patentable weight to descriptive material absent a new and unobvious functional relationship between the descriptive material and the substrate. *See In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994); *In re Ngai*, 367 F.3d 1336, 1338, 70 USPQ2d 1862, 1863-64 (Fed. Cir. 2004). Thus, when the prior art describes all the claimed structural and functional relationships between the descriptive material and the substrate, but the prior art describes a different descriptive material than the claim, then

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the descriptive material is nonfunctional and will not be given any patentable weight.

That is, such a scenario presents no new and unobvious functional relationship between the descriptive material and the substrate. The Examiner asserts that the data identifying the airline flights as substantially all U.S. airline flights adds little, if anything, to the claimed acts or steps and thus do not serve as limitations on the claims to distinguish over the prior art. MPEP 2106IV b 1(b) indicates that "nonfunctional descriptive material" is material "that cannot exhibit any functional interrelationship with the way the steps are performed". Any differences related merely to the meaning and information conveyed through data which does not explicitly alter or impact the steps is non-functional descriptive data. Except for the meaning to the human mind, the data identifying the flights as substantially all U.S. airline flights does not functionally relate to the substrate and thus does not change the steps of the method as claimed. The subjective interpretation of the data does not patentably distinguish the claimed invention.

Appellant further states that none of the references teach "flagging records in the database corresponding to flights in which the updated times of departure or arrival vary from the scheduled times of departure or arrival by a predetermined amount of time". The Examiner respectfully disagrees with this assertion. Once again, giving the claims the broadest reasonable interpretation, the term "flagging" can be interpreted to mean identifying or determining records. The Examiner asserts that Nelson discloses flagging (*determining*) records in the database corresponding to flights in which the updated times of departure or arrival vary from the scheduled times of departure or



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arrival (col. 3, lines 44-67 *Customer Message Manager (CMM) (105) comprises a notifier and updater system (110) which is the computing engine that drives the determination of which events require customer notification and then commences the process using a set of notifier rules(106) in making this determination, col. 5, lines 3-13 - CMM 105 polls airline databases 130 and then based on notifier rules, notifier and updater system 110 determine (flag) what events require customer notification*). Nelson in combination with Becker disclose flagging records in the database corresponding to flights in which the updated times of departure or arrival vary from the scheduled times of departure or arrival by a predetermined amount of time.

Appellant argues that none of the references teach the limitation of “ periodically querying the database to locate all flagged records”.

The Examiner respectfully disagrees. The Examiner asserts that Nelson discloses a code segment for periodically querying the database to locate all flagged records (Figure 3A 300-320 col. 3, lines 54-67 CMM 105 comprises a notifier and updater system 110 which is the computing engine that drives the determination of which events require customer notification and then commences the notification process. Notifier and updater system 110 uses a set of notifier rules 106 in making this determination and stores customer data in database 108. For example, notifier rules 106 define upon occurrence of a predetermined event, the action that is to be taken. If, for example, the notifier and updater system 110 receives a flight cancellation event, *notifier and updater system 110 can then **query** the airline databases 130 and*

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*determine what passengers are on the canceled flight and **initiate the order of notification to the affected customers based on some criteria***).

Appellant states that Nelson does not teach or suggest any means for the databases to specifically determine delays or provide events as the databases are external to the customer's CMM and not relevant to a specific operation. The Examiner is unclear what appellant is arguing with this statement. Clearly Nelson discloses polling an airline system to receive airline information, evaluating (comparing) the information to generate notification events, determining a set of customers to provide notification of the notification event and initiating notification (col. 3, lines 17-25). Furthermore, none of appellant's claim limitation are directed to a means for the databases to determine delays or provide events.

The appellant then states that even if the references did teach all of the limitations of claim 6, there is not reason that would have prompted a person of ordinary skill in the art to combine the references. Appellant then incorporates by reference the arguments set forth in claim 1 regarding the Examiner's rationale for combining the references. The Examiner therefore directs the Board to the Examiner's response in claim 1 for this discussion.

Examiner again notes that applicant, on page 17, raises the standard from one of ordinary skill in the art to one skilled in the art.

**Issue B. Is the rejection of claims 10-13, 22-23, and 26 proper under 35 USC 103(a)?**

The Examiner acknowledges the typographical errors as to claims 10-13, 22-23, and 26. Claims 10-13, 22-23 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Becker in view of Schlumberger. Appellant is correct in noting that Nelson was not used as a reference in this set of claims.

Claim 10 was rejected as follows:

Becker discloses a computer program stored on a computer readable medium for operating a host computer to automatically notify passengers or agents of changes in status for airline flights, comprising code segments executed by the host computer for:

receiving passenger reservation information from an airline passenger **or** an agent of the passenger (col. 5, lines 42-55 *Data elements are collected/captured for their personal profile for uniquely identifying the traveler, their personal travel route(s) and their preferred notification criteria and communication devices for information delivery*; Figure 1 (40) col. 5, lines 20-29 *conditions information (accidents, congestion, delays)*; *Personalized multi-Modal Route Profiles – Route –Description – Origin – Destination*; col. 4, lines 41-58, *discloses travel mode as being rail, ferry, air, or tramway, etc., profile contains such items as the traveler's name, preferred travel mode, travel time(s)*);

storing the passenger reservation information including the scheduled time of departure or arrival of the flight (col. 4, lines 41-58 – *personalized multi-modal profile contains such item as the notification time window(s) during with travel is anticipated*; col. 5, lines 42-55 – *each route defined within the profile contains a description, origin,*

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*multi-modal path and destination and the notification criteria includes the days of the week and times of day that travel on the route is anticipated)*

receiving contact information from the passenger (col. 4, lines 41-58 (*profile contains preferred information delivery device, e.g. telephone, fax, pager, e-mail, etc, Figure 1 (40);*

receiving an updated time of departure or arrival for the flight (col. 4, lines 29-40 *system receives real-time travel condition information);*

accessing the date ranged information and comparing the scheduled time of departure or arrival to the updated time of departure or arrival (col. 2, line 52 thru col. 3, line 3 *system and method for filtering real time travel condition information in regard to traveler identity, destination, route, mode of conveyance and/or intended travel time for limitation information, col. 12, line 64 thru col. 13, line 3 (successful comparisons provided identification of the affected customers and corresponding route for storage with information concerning the travel conditions event as an affected customer list is built, col. 5, line 67 thru col. 6, line 4 once determination made that customer's designated notification time window falls some time during the expected duration of the event, a determination is made as to when to notify the customer of the travel condition); and*

automatically pushing **flight status** notification information to the passenger or to an agent of the passenger who has requested notification information via the contact information if the updated time of departure or arrival varies from the scheduled time of departure or arrival by a predetermined amount of time (col. 4, line 67 thru col. 5, lines 4

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*system notify them **automatically** according to a set of notification criteria such information thresholds e.g. total length of anticipated delays – which could include a predetermined amount of time between 10-60 minutes or an amount of time of approximately 30 minutes; col. 6, lines 4-8 the final filtering process is to determine the customer's notification preference e.g. telephone, pager, email, facsimile, Internet, Intranet; a personalized multi-modal profile (Figure 1 (100)) contains such items as the notification time windows during which travel is anticipated (col. 4, lines 41-58) the end users may request personalized information at any time (col. 4, line 64 thru col. 5, line 4) (this can be broadly interpreted to incorporate a request at the time the reservation is made).*

The Examiner stated in the non-final Office Action mailed on June 7, 2006 and again in the final Office Action mailed on December 27, 2006 that Becker does not disclose queuing the passenger information at a date-ranged queue using the time of departure or arrival or that the passenger reservation information includes a request for automatic flight status change notification information for an airline flight the passenger is reserving or that the request is at the time of making the reservation.

The Examiner asserted that Becker discloses collecting/capturing the personal profile information which includes time of departure or arrival and the expected duration of the travel condition wherein a determination is made that the customer's designated notification time window falls some time during the expected duration of the event and then a determination is made as to when to notify the customer about the condition (col. 5, line 42 thru col. 6, line 8).

The Examiner further took Official Notice that putting information in a queue is old and well known in the art since queuing is simply listing items to be done, for example, a print queue for a printer prints the items in the order that they are requested.

Therefore, the Examiner asserted that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Becker to include the step of queuing the information with respect to date in order for ease of processing since Becker already discloses storing the passenger reservation information including the scheduled time of departure or arrival of the flight (col. 4, lines 41-58 – *personalized multi-modal profile contains such item as the notification time window(s) during with travel is anticipated*; col. 5, lines 42-55 – *each route defined within the profile contains a description, origin, multi-modal path and destination and the notification criteria includes the days of the week and times of day that travel on the route is anticipated*).

Schlumberger discloses receiving passenger reservation information from an airline passenger or an agent, the passenger reservation information including a request for automatic flight status change notification information for an airline flight the passenger is reserving (page 1, paragraph 2, page 2, paragraph 2; Schlumberger uses smart card-enabled push/pull technology to deliver personalized flight information; when a subscriber books a flight on a participating airline, the subscriber will have the option of automatically receiving the following information and alerts delivered via his/her hand set: Alerts about gate changes, flight delays or cancellations.)

Thus, the Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate into the notification system

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disclosed in Becker the option at the time of booking to receiving the alert information taught in Schlumberger so as to provide personalized and on-demand flight information with a complementary service for the most important common customers creating a value added service with special appeal to business travelers, thus allowing the airline companies to retain customers and grow their subscriber base.

The appellant states that the Examiner erred as to claim 10 because claim 10 does not have the following limitation:

storing the passenger reservation information including the scheduled time of departure or arrival of the flight

However, appellant has a limitation of queuing the passenger reservation information to a date-ranged queue using the scheduled time of departure or arrival of the flight. Thus, as set forth below, Becker's teaching of storing passenger reservation information including departure or arrival of a flight in combination with applicant's admission that queuing is old and well known, the Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time of the invention to queue the passenger information including the scheduled time of departure or arrival.

Appellant states on page 20 that, as acknowledged by the Examiner, the references do not disclose queuing the passenger information in a date-ranged queue using the time of departure or arrival. The Examiner took Official Notice for the first time in the Non-Final Office Action mailed on June 7, 2006 stating that putting information in a queue is old and well known. In the applicant's response submitted on October 10, 2006, the appellant states that the Examiner took Official Notice that putting information

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in a queue is old and well-known in the art and that the Examiner asserted that queuing is simply listing items to be done giving the example of a print queue printer which prints the items in the order that they are requested. The appellant then states that while queuing is old in the art, appellant traverses the Examiner's Official Notice that date-ranged queuing is known in the art. Appellant then states that in date-ranged queuing, a host computer queues the passenger name records using the scheduled date and time of departure or arrival of the flight as the queuing mechanism. The Examiner, in response to applicant's comments, in the Final Office action mailed on December 27, 2006, stated that as for applicant's argument against Examiner's Official Notice regarding date-ranged queuing, that the appellant was mistaken as to the rejection. The Examiner took Official Notice that queuing is old and well known, which appellant also admits. Becker discloses reservation information including the scheduled time of departure or arrival of flights. The Examiner then asserted that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Becker to include the step of queuing the information with respect to date in order for ease of processing.

The Examiner further asserted that a "traverse" is a denial of an opposing party's allegations of fact.<sup>1</sup> The Examiner respectfully submitted that appellant's arguments and comments did not appear to traverse what Examiner regards as knowledge that would have been generally available to one of ordinary skill in the art at the time the invention was made. Even if one were to interpret appellant's

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<sup>1</sup> Definition of Traverse, Black's Law Dictionary, "In common law pleading, a traverse signifies a denial."



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arguments and comments as constituting a traverse, appellant's arguments and comments do not appear to constitute an adequate traverse because appellant has not specifically pointed out the supposed errors in the examiner's action, which would include stating why the noticed fact is not considered to be common knowledge or well-known in the art. 27 CFR 1.104(d)(2), MPEP 707.07(a). An adequate traverse must contain adequate information or argument to create on its face a reasonable doubt regarding the circumstances justifying Examiner's notice of what is well known to one of ordinary skill in the art. In re Boon, 439 F.2d 724, 728, 169 USPQ 231, 234 (CCPA1971).

Therefore, the Examiner asserts that since appellant did not seasonably traversed the well known statement during examination, then the object of the well known statement is taken to be admitted prior art. In re Chevenard, 139 F.2d 71, 60 USPQ 239 (CCPA 1943). MPEP 2144.03

Appellant further states that in appellant's invention, date range queuing is used to store passenger reservation information including a request for automatic notification based on schedule time of departure or arrival of the flight. First, the Examiner notes that regarding claim 10, as written, the fact that the passenger reservation information includes a request for automatic flight status change notification information for an airline flight the passenger is reserving, this request information is non-functional descriptive data. When presented with a claim comprising descriptive material, an Examiner must determine whether the claimed nonfunctional descriptive material should be given patentable weight. The Patent and Trademark Office (PTO) must consider all

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claim limitations when determining patentability of an invention over the prior art. *In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401,404 (Fed. Cir. 1983). The PTO may not disregard claim limitations comprised of printed matter. See *Gulack*, 703 F.2d at 1384-85, 217 USPQ at 403; see also *Diamond v. Diehr*, 450 U.S. 175, 191, 209 USPQ 1, 10 (1981). However, the examiner need not give patentable weight to descriptive material absent a new and unobvious functional relationship between the descriptive material and the substrate. See *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994); *In re Ngai*, 367 F.3d 1336, 1338, 70 USPQ2d 1862, 1863-64 (Fed. Cir. 2004). Thus, when the prior art describes all the claimed structural and functional relationships between the descriptive material and the substrate, but the prior art describes a different descriptive material than the claim, then the descriptive material is nonfunctional and will not be given any patentable weight. That is, such a scenario presents no new and unobvious functional relationship between the descriptive material and the substrate. The Examiner asserts that data identifying the passenger reservation information as including a request for flight status change information adds little, if anything, to the claimed acts or steps and thus do not serve as limitations on the claims to distinguish over the prior art. MPEP 2106IV b 1(b) indicates that "nonfunctional descriptive material" is material "that cannot exhibit any functional interrelationship with the way the steps are performed". Any differences related merely to the meaning and information conveyed through data which does not explicitly alter or impact the steps is non-functional descriptive data. Except for the meaning to the human mind, the data identifying the fact that the reservation information contains a

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request for status update does not functionally relate to the substrate and thus does not change the steps of the method as claimed. The subjective interpretation of the data does not patentably distinguish the claimed invention.

Furthermore, Schlumberger teaches the limitation of the passenger request information including a request for automatic flight status change notification.

Appellant further states that Becker teaches away from the use of date-ranged queuing. Appellant is directed to Dystar Textilfarben GMBH & CO Deutschland KG v. C.H. Patrick CO., 80 USPQ2nd 1641 (Fed. Cir. 2006) wherein the court stated the following as to the requirement of teaching away:

b. Does the prior art teach away from the claimed invention?

We reject DyStar's assertion that contemporaneous articles by Wimmer and Brochet teach away from the combination of Brochet and Chaumat, and thus the claimed process. DyStar acknowledges that no specific language in these references teaches away from the invention of the '992 patent. Rather, because these references do not discuss the stabilization of leuco indigo solution (in solution form) for immediate addition to a dyebath, DyStar somehow concludes that these references teach that leuco indigo solution "cannot be used to dye but is instead useful only as an intermediate."

Although Wimmer's contemporaneous article only describes the use of indigo solution as an intermediate product, he does not retract his patent language indicating that "the solution can be filtered and the filtrate (which contains a high percentage of indigo white) can be placed on the market without any further treatment". Wimmer, II.33-37. Likewise, the Brochet patent, directed toward all vat dyestuffs, broadly teaches that the process "produce[s] mother-liquors which can be diluted immediately before use, or be treated by evaporation under reduced pressure or by any other means to obtain concentrated products for sale." Brochet, II.66-70. This language implies that all vat dyestuffs, including indigo, may either be used immediately for dyeing or concentrated prior to sale. In his contemporaneous article, Brochet stated that his catalytically hydrogenated solution could be used "economically to obtain concentrated indigo white [i.e., leuco indigo] solutions that are free of impurities and alkaline salts, that can be concentrated in vacuum in order to obtain white indigo as a paste". This mere failure to discuss immediate use of his leuco indigo solution for dyeing is not the

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same thing as Brochet stating in his article that, though most dyestuffs may be used immediately or stored in oxygen-excluding containers, his leuco indigo solution may only be concentrated in paste form. We will not read into a reference a teaching away from a process where no such language exists.

The Examiner asserts that there is no specific language in Becker that would teach away from the use of date-ranged queuing.

Appellant continuously argues the references individually throughout the Appeal Brief. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Therefore, in response to applicant's argument that Becker fails to teach or suggest receiving passenger reservation information from an airline passenger or an agent of the passenger, wherein the passenger reservation information includes a request for automatic flight status change notification information for an airline flight the passenger is reserving, and then automatically pushing flight status change notification information to the passenger or agent if the updated time of departure or arrival varies from the scheduled time of arrival or departure by a predetermined amount of time, the Examiner agrees. It is Becker in combination with Schlumberger that teach these limitations.

Again, on page 22, appellant argues Schlumberger separately stating that Schlumberger fails to teach or suggest receiving passenger reservation information from an airline passenger or an agent of the passenger wherein the passenger

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reservation information includes a request for automatic flight status change notification information for an airline flight the passenger is reserving and then automatically pushing flight status change notification information to the passenger or agent if the updated time of departure or arrival varies from the scheduled time of arrival or departure by a predetermined amount. The Examiner asserts that Schlumberger teaches receiving passenger reservation information from an airline passenger or an agent of the passenger wherein the passenger reservation information includes a request for automatic flight status change notification information for an airline flight the passenger is reserving, as set forth above. Becker in combination with Schlumberger discloses and teaches receiving passenger reservation information from an airline passenger or an agent of the passenger wherein the passenger reservation information includes a request for automatic flight status change notification information for an airline flight the passenger is reserving and then automatically pushing flight status change notification information to the passenger or agent if the updated time of departure or arrival varies from the scheduled time of arrival or departure by a predetermined amount, with Becker teaching automatically pushing flight status change notification if the updated time varies from the scheduled time by a predetermined amount.

Once again, in response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was

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within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

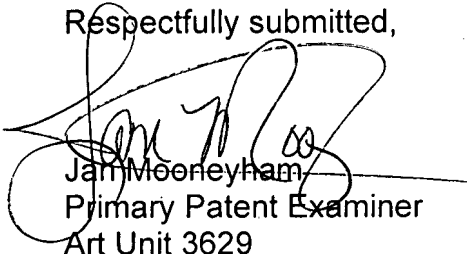
The Examiner notes that the appellant has provided arguments as to claims 1, 6 and 10 and has not provided individual arguments as to any of the dependent claims.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

  
Jan Mooneyham  
Primary Patent Examiner  
Art Unit 3629

Conferees:

John Weiss, Supervisory Patent Examiner, Art Unit 3629

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